

The Mint of the United States at Philadelphia,
Superintendent's Office,

Jan. 16, 1900.

Hon. Henry K. Boyer,
Superintendent.

Sir:

I have very carefully examined the statement furnished by the Coiner of the Mint at San Francisco, showing the life of the dies of different denominations during the calendar year 1899, and find it a very interesting statement and highly approve of all such close attention to results.

There is so much that could be said upon the showing of this record of the dies- that I scarcely know where to begin or end without the risk of being thought tedious by the length of my letter- but some few points I must note.

In regard to the shape of the die, I do not think there is anything in that- although I am open to conviction, but it is always contended by all who have experience in hardening steel that the more uniform the shape the better the results, and our form of die is the more uniform.

Why the dies last sent for the dime have not been satisfactory I cannot explain, and can only call your

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attention to the uncertain life of any die. You will find by an examination of the statement furnished that dime die No. 29 of their own hardening coined 200,470 pieces, while No. 24, also of their own hardening, gave out after a run of 11,100 pieces. This only proves that do what you will there is an element of uncertainty in all hardened steel.

Now as to the question of results- which after all is the one that most concerns us:-

The Coiner's statement shows that the average life of the obverse dime was 85,511 pieces, and reverse 94,062. I find that at this Mint with the same denomination we show the following:- Average life of obverse dime 174,829 pieces, and reverse 212,835 pieces. This demonstrates that our average with the obverse dies was 89,318 pieces more than San Francisco, and 118,773 more pieces with the reverse- or in other words- about double the number of pieces. Now why did they fall so far below us is the question- and as the dies are all the same we must look in some other direction for the cause.

The first point that I would suggest to give attention is the planchets that may differ from ours in size and shape of mill, and I propose to show exactly what we are doing and then with good annealing their results should be as good as ours, or if it is thought of

sufficient importance Mr. Downing might extend his trip and give the Mint at San Francisco the benefit of our experience.

I learn that we cut the dime blank with a bed ground .711" and mill the piece to drop into the collar. I enclose a tool for dressing the mill which will give the correct shape.

One more point in the Coiner's statement that is quite interesting and worthy of notice is- that standard dollar dies Nos. 37, 38, 39 and 40 furnished the Mint at San Francisco, and hardened by me, coined on an average 249,631 pieces- a very fair average, and yet the Mint at New Orleans complains of the standard dollar dies- although they are as near as it is possible to make two dies the same in all cases.

Very respectfully,

A handwritten signature in brown ink that reads "Chas. E. Barber". The signature is fluid and cursive, with "Chas." written above "E. Barber".

Engraver.